

PEDIATRICS REVISION



NOTES OF MEDADTEAM

contents:

-pediatrics revision



2010

only
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NMT11

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Introduction

How to answer different questions

▪ If asking about etiology:

- Etiology = causes = classifications = types
- If question is "enumerate causes", so enumerate causes without giving any comment.
- If question is "causes of", so
 - Mention causes
 - write a comment beside the important causes, this comment is the differential diagnosis of the cause[the comments differentiate between different causes, mostly will be the clinical picture].

▪ If asking about clinical picture, diagnosis:

- "Clinical picture of ..." = "the clinical features of ..." = "diagnostic clinical features", in this questions write the clinical picture as it is.
- If question is "diagnostic investigations", write all investigations
- If the question is "diagnosis", so write:
 - Clinical picture
 - Investigations
 - Differential diagnosis if present
- If question is "diagnostic features" so write:
 - Clinical picture
 - Investigations

"Diagnostic features" = Clinical picture + Investigations
"Diagnostic clinical features" = Clinical Picture ONLY

▪ If asking about treatment:

- Write the treatment
- Write the prevention whenever possible.

INFECTIONS

1. "Causes of maculopapular rash" "differential diagnosis of maculopapular rash"

■ Answer:

I. Infections:

■ infections (skin rash is essential)

▪ Measles:

- Koplik's spot is pathognomic

- Rash:

* Rash appears on 4th day, fever rises sharply with rash appearance.

* distribution : rash spreads in 3 days , starting in face then spreading all over the body , fades in 3 days in the same way of distribution .

▪ rubella : (German measles) :

- Cervical lymphadenitis.

- Rash:

* Rash appears on the 2nd day of fever, fever drop with rash appearance.

* All rash duration is 3 days.

▪ Scarlet fever:

- Sore throat.

- Rash:

* Rash appears on 2nd day, fever rises with rash appearance

* Sand –paper like papules.

* Tongue: white then red strawberry tongue.

▪ Roseola infantum: comment on rash fever relationship & ditribution

■ Other infections: rash NOT essential

▪ infectious mononucleosis :

- Lymphadenitis, splenomegaly, sore throat.

▪ typhoid fever :

- Splenomegaly, abdominal symptoms (commonest).

- toxic facies

▪ Enteroviral infections :

- non specific rash

II. Rheumatic diseases: discuss

III. Skin diseases: discuss

2. "Causes of vesicular rash" look chicken pox

3. "Causes of fever with purpuric rash"

■ Answer:

I. bacterial causes:

- enumerate causes

- write management of septicemia from "septicemia".

II. Viral causes: discuss

III. Malignancy: as leukemia: arthralgia, arthritis, anemia, purpura, weight loss.

IV. Rheumatic disease: as systemic lupus erythematosus: with purpuric rash.

Measles

1. "clinical picture of measles "

▪ Answer : discuss

2. Rash:

- Site at onset: face (along hair lines & behind the ears)

2. " complications of measles "

- DO NOT comment on items of complications; write as it is in the book

▪ Answer :

1. respiratory : discuss

▪ bronchopneumonia by :

- Virus itself or by 2ry bacterial infection.

2. CNS : discuss :

▪ Subacute sclerosing panencephalitis (SSPE): dementia, rigidity, myoclonus seizures.

3. " treatment of measles "

▪ Answer :

1. prevention : discuss

2. specific treatment :

▪ gamma globulins :discuss

▪ oral vitamin A : discuss

▪ IV vitamin A : discuss

German Measles

1. " clinical picture of German measles "

▪ Answer : discuss

2. "complications of German measles"

▪ Answer : uncommon in children

1- neurological : encephalitis , neuronitis

2- arthritis , thrombocytopenia

3- congenital rubella syndrome : discuss it from " neonatal infections " ,book 1 page 67

Roseola Infantum

1. "discuss roseola infantum"

▪ Answer:

- Incidence, etiology, clinical picture, treatment: discuss

Infectious Mononucleosis

▪ Important notes about:

- Prolonged fever
- Lymphadenitis & splenomegaly
- Sore throat
- CBC

Scarlet Fever

1. "clinical picture of scarlet fever "

▪ Answer : discuss

- Prodromal stage : discuss

- diagnostic stage : discuss

1- skin rash (exanthema) : discuss

- type : discuss

- *red-puncture that blanches on pressure

- spread : discuss

- *Limbs: areas of hyperpigmentation may appear in the cubital fossa (pastia lines)

2- Mucous membranes (enanthema):

- tongue changes:

- Early (1st day): white strawberry tongue:

The tongue is covered with white coat with red edematous papillae emerging through this coat

- Late (3rd day): red strawberry tongue:

The coating is shed off leaving a beefy red tongue with swollen papillae.

- Tonsils, pharynx & palate: show redness & edema.

2. " complications of scarlet fever "

▪ Answer:

1. Local: discuss

2. Remote: discuss

- Rheumatic fever :

- Diagnosis of rheumatic fever is based on the modified Jones criteria:

- The presence of 2 major criteria OR 1 major and 2 minor criteria, in presence of evident of recent streptococcal infection.
 - major criteria : enumerate :
 - Polyarthrititis
 - Chorea
 - Subcutaneous nodules
 - carditis
 - erythema marginatum
 - minor criteria : enumerate :
 - fever (38.5-40 C)
 - arthralgia
 - previous rheumatic fever
 - Elevated acute phase reactants: ESR, CRP, leukocytosis.
 - Evidence of recent streptococcal infection: enumerate
 - Acute glomerulonephritis:
 - Oliguria, hematuria, edema & hypertension
 - Erythema nodosum.
3. " investigations of scarlet fever "
- Answer : discuss investigations of scarlet fever
4. " treatment of scarlet fever "
- Answer : discuss treatment of scarlet fever
5. " Scarlet fever complications & *its* prevention "
- Answer:
 - Complications of scarlet fever: discuss
 - Prevention of scarlet fever: discuss
6. " Scarlet fever complications & *their* prevention "
- Answer:
 - Complications of scarlet fever: discuss as before.
 - prevention of complications of scarlet fever :
 - discuss prevention of rheumatic fever from " rheumatic fever, book 2 , page 26"

Chicken Pox

1. "Clinical picture of varicella"
- Answer: discuss clinical picture of varicella
2. "Causes of vesicular rash" "differential diagnosis of vesicular rash"
- Answer: discuss from "chicken pox", p. 113, book 1
 - I- infections:
 - Chicken pox:
 - Write all clinical picture of chicken pox OR
 - write description & site of the rash at least.
 - Herpes zoster: discuss
 - Herpes simplex: discuss
 - II- skin diseases: discuss

3. "Complications of chicken pox" for oral

- Answer : discuss ,most important point is immunocompromised patient

4. "treatment of chicken pox "

- Answer: discuss

Herpes Simplex

1. Neonatal infection : as clinical picture of TORCH in " neonatal infections , p 67 , book 1 "

2. Acute gingivostomatitis as painful oral lesions in " gastroenterology"
p.65, book 2

Mumps

1. " clinical picture of mumps "

- Answer :
 - prodromal stage: discuss
 - Diagnostic stage: discuss
 - 1- Salivary gland swellings: discuss
 - 2- Other Manifestations:
 - 1- Meningoencephalomyelitis: discuss
 - 2- Pancreatitis: discuss
 - 3- Epididymorchitis: discuss

2. " complications of mumps "

- Answer :
 - 1. CNS :
 - Meningoencephalitis: discuss from p.116 book 1
 - 2. CVS: discuss
 - 3. Abdominal
 - Pancreatitis: discuss from p.116 book 1
 - 4. Purpura: thrombocytopenic purpura
 - 5. Other:
 - Sex organs
 - Epididymo orchitis or oophoritis: discuss from p. 116 book 1
 - Special senses: discuss
 - Skeletal: discuss

3. " parotid swelling "

- Answer:
 - 1. Mumps:
 - fill space behind mandible.

- Raises ear lobule & external auditory canal
- Pain around ear, aggravated by chewing movement
- 2. Suppurative parotitis: pain, toxemia & pus from the gland duct
- 3. Recurrent parotitis: viral or allergic in origin - recurrent
- 4. Calculus obstruction or stenosis of the duct: intermittent swelling
- 5. Mikulicz disease: painless enlargement of the lacrimal & parotid gland

4. "Differential diagnosis of mumps "

■ Answer:

1. other parotid swelling: discuss
2. cervical lymphadenopathy : discuss
3. Dental conditions: localized tenderness over septic tooth / oral cavity e.g. septic tooth

Pertussis (Whooping Cough)

1. " Pertussis "

■ Answer:

- Etiology: discuss
- Clinical picture:
 - 1- Catarrhal stage:
 - Nasopharyngitis (low grade fever - sneezing - lacrimation)
 - Cough during this stage is mild day & nocturnal
 - 2-paroxysmal stage: discuss
 - (about 5-10 during one expiration)
 - 3- Convalescent stage: discuss
 - vomiting becomes less frequent
- complications : discuss
- investigations : discuss
- treatment : discuss
- pertussis like illness : adenovirus infection

Tetanus

1. " treatment of tetanus "

■ Answer:

- Prevention & supportive Treatment: discuss, discuss DPT from "P. 130, 131 book 1"
- Specific Treatment: discuss, doses may NOT be very important
- Treatment: of complications: discuss

Diphtheria

*CNS complications of diphtheria is required in question "causes of acute paralysis"

Fever

1. "Grades of fever "

2. "benefits of fever " (oral question)

▪ Answer:

- a- enhance defense mechanism as it increases leukocytic migration (Chemotaxis)
- b- May kill the organisms

3. "Adverse effects of fever " (oral question)

▪ Answer:

- a- Fatigue & anorexia due to toxemia, viremia & fever itself
- b- Weight loss due to increased metabolic rate & due to break down of proteins

4. "Causes of fever ", "etiology of fever ", " classification of fever", " types of fever"

▪ Answer:

•Fever of short duration (less than 1 week): short febrile illness:

1- fever without cause (with localizing signs) : discuss

2- fever without cause (with localizing signs) : discuss

•comment on " fever & general clinical assessment " of each item from Table ,p.123 book 1

- viremia:

•fever: mild to moderate

•general clinical assessment : fair general condition

- bacteremia :

•more than 39.4C – high fever

•bad general condition- look :sick

- septicemia :

•high fever or hyper pyrexia

•Very bad general condition- look : toxic & very ill

•Other findings: pallor, cold extremities, mottled skin. Persistent vomiting & disturbed consciousness.

•Fever of long duration more than (10- 14days): prolonged fever: discuss

5. " differential diagnosis of fever without focus (simple fever) "

▪ Answer: discuss

- put it in paragraph NOT in table
- focus on the items for DD which are "fever, general clinical assessment & investigations "
- + discuss general clinical scale (assessment)

6. " management of septicemia "

▪ Answer:

•Clinical diagnosis according to general clinical scale:

- Fever: high fever or hyperpyrexia

- General clinical assessment:

•Very bad general condition.

•Look: toxic & very ill

•Other findings: pallor, cold extremities .mottled skin persistent vomiting, may be disturbed consciousness.

•urgent hospitalization : discuss

1- immediate investigations: discuss

2- parenteral antibiotics : discuss

3- complications or Manifestations of advanced sepsis : discuss

7. " Definition & etiology of prolonged fever (F.U .O) "

▪ Answer: discuss def & etiology of prolonged fever

8. "Management of prolonged fever"

▪ Answer: discuss management of prolonged fever.

9. " Investigations of prolonged fever"

▪ Answer: discuss investigations of prolonged fever

10. " Management of febrile patient"

▪ Answer: discuss management of febrile patient.

1- Supportive measures: discuss

•Antipyretics: write at least 2 with their doses

2- Specific treatment:

•antibiotics of common use in pediatrics

- write it if you have time

- write group names & ONE example for each.

Immunization

1. " compulsory vaccines in Egypt "

■ Answer:

- discuss table p.129 book 1
- write brief comment on each vaccine including :
 - Advantages: one item
 - Disadvantages: one item
 - Precautions: one item

2. " non compulsory vaccine "

■ Answer: discuss non compulsory vaccines:

- Focus on 2 points: 1- indications 2- when administered
- 1- Bacterial: Hib – DT
- 2- Viral: varicella (chicken pox) – HepA – influenza – rabies
- varicella , Hep.A , influenza : administered after 1st year

3. "Vaccination during 1st year "

■ Answer:

1. Compulsory: discuss those in the first year
2. Non compulsory: Bacterial, HIB ONLY; discuss

4. " viral vaccines "

■ Answer:

1. Compulsory:
 - a- MMR: discuss
 - c- Polio: discuss
2. Non compulsory:
 - a- chicken pox: discuss
 - c- Influenza: discuss
 - b- Measles: discuss
 - d- Hepatitis B virus: discuss
 - b- Hepatitis A vaccine
 - d- Rabies: discuss

* enumerate the vaccines & write a brief comment for each.

NB: for rabies vaccine:

- **Vaccination is indicated immediately if biting animal is unavailable**
- **(If the animal is under observation, vaccination can be postponed until the animal acts abnormally)**

NUTRITION

Nutritional Requirements

1. "caloric requirements"
 - Answer: discuss energy (calories)
2. "protein requirements"
 - Answer: discuss proteins

Breast Feeding

1. "maintenance of milk flow"
 - Answer:
 - Factors that maintain milk flow: discuss
 - Factors that may affect milk production: discuss
2. "factors that may affect milk production"
 - Answer: discuss factors that may affect milk production
3. "advantages of breast feeding"
 - Answer:
 - Infant:
 - 1- Nutritional advantages: discuss from table p. 81 book 1
 - Protein quality : discuss
 - Fat quality :
 - Fat globules: discuss
 - Volatile Fatty acids: discuss
 - Essential fatty acids: discuss
 - Triglycerides: do not mention it
 - 2- Immunological advantages: protective mechanisms in human milk: discuss
 - 3- General advantages: discuss
 - Mother and infants: discuss
4. "protective mechanisms in human milk"
 - Answer: discuss immunological advantages: protective mechanisms
5. "composition of breast milk" "Composition of human milk"
 - Answer:
 - 1- Colostrum: discuss
 - 2- Transitional milk: discuss
 - 3- Mature milk: discuss it from "breast milk in table p. 81 book 1"
 - * concerning percents: most important:

- 1- Calories: 67 kcal /100 cc milk
- 2- * Carbohydrates: 7 gm %
 - * Fat: 3.5 gm %
 - * Protein 1.2 gm %
- 3- water: 87.5 %

6. " Program of breast feeding "

- Answer: discuss program of breast feeding

7. " technique of breast feeding "

- Answer: discuss technique of breast feeding

8. " Indications of adequate breast milk intake "

- Answer: discuss indications of adequate breast milk intake

9. " Drugs secreted in breast milk "

- Answer: discuss drugs secreted in breast milk

10. " Management of minor problems with breast feeding "

- Answer:

1. Nipple soreness:

- Causes & management: discuss

2. Breast engorgement:

- Causes: discuss

- Management:

- * Proper breast evacuation starting from day 4 (Onset of excessive milk secretion)

~~5 min / breast / feed on the first day~~

~~10 min / breast / feed on the 2nd day~~

~~15 min / breast / feed there after~~

~~Vigorous infant needs 5-7 minutes to empty the breast~~

- * Breast pump may be needed

3. Breast milk:

- * Insufficient breast milk:

- Management: discuss

- * Breast feeding jaundice:

- Causes & management: discuss

Formula Feeding

1. " indications of formula feeding "

- Answer: discuss indications of formula feeding

NB: contraindications of breast milk:

1-maternal illness

2-infant illness

2. "Types of formula feeding"

▪ Answer:

- Types of formula feeding: discuss
- Program of formula feeding
 - 1- Decide the type of milk.
 - 2- Determine the number of feeds / day: discuss
 - 3- Determine the amount of per feed
 - Weight method: discuss
 - Age: method
 - 4- preparation:
 - Dilution: discuss
 - Sterilization

3. "Disadvantages of animal milk"

▪ Answer:

- General disadvantages: discuss
- lacking of quantitative & qualitative balance of breast milk:
Discuss from table p.81 book 1
- lacking of immunological values of breast milk: breast milk اعكس بتاعت ال

4. "Preterm infant formula"

▪ Answer:

- Preterm infant formula: discuss
- Program of formula feeding: discuss as above

5. "Standard humanized formula"

▪ Answer:

1. Modified
2. Indications: complementary, supplementary & substitutive
3. Example:
4. Formula feeding program: discuss

Weaning

1. "weaning"

▪ Answer:

- Definition: discuss
- Onset time: discuss
- Principles: discuss
- Suggested program: discuss
- N.B. recommended in relation to age:

2. " Principles / rules / precautions of weaning "

▪ Answer:

- New food should be: discuss
- avoid: discuss

▪ " Factors essential for successful breast feeding "

▪ Answer:

1. Breast feeding advantages: write 4 point for example
2. Maintenance of milk flow: briefly comment
3. Program of feeding: comment briefly
4. Technique of feeding: comment briefly
5. Early minor problems with breast feeding: comment briefly
6. Drugs secreted in breast milk: example for some drugs
7. Indicators for adequate breast feeding: comment briefly
8. Duration of breast feeding

Protein Energy Malnutrition

1. " clinical spectrum of protein energy malnutrition "

▪ Answer: discuss classification of protein energy malnutrition

- Marasmus: severe form of chronic caloric deficiency.
 - Clinical picture: include {summary for clinical picture}
 - Loss of subcutaneous fat from abdomen, thigh & face
 - Growth failure
 - Muscle wasting
 - Bony prominence: marked
- Kwashiorkor: acute form of protein deficiency
 - Constant features: enumerate
 - Variable features: enumerate
- Marasmic kwashiorkor: mixed form of malnutrition
 - discuss it from: "differential diagnosis of kwashiorkor p.95 , book 1
- Nutritional dwarfism: mild to moderate form of chronic under nutrition starting in early infancy
 - discuss it from "differential diagnosis kwashiorkor p.95, book 1.
- Mixed form.

2. " Management of protein energy malnutrition "

▪ Answer: short

- Management: (treatment) of PEM: discuss
- Clinical spectrum of PEM: discuss as before

▪ Answer: long

- Management (treatment) of PEM: discuss
- Diagnosis: discuss in details

3. " Nutritional management of protein energy malnutrition "

Answer: discuss nutritional management of PEM

4. " Prevention of protein energy malnutrition "

Answer: discuss prevention of PEM

Marasmus

1. " etiology of marasmus " "causes of under nutrition " " causes of failure to thrive - oral- " " causes of weight loss -oral- "

▪ Answer:

- 1- nutritional marasmus : discuss
- 2- non nutritional marasmus
 - write it without the diagnosis
 - do not forget these examples: TB, diabetes, malabsorption syndrome
 - Mention ALL ITEMS

2. " Clinical picture of marasmus "

▪ Answer:

- 1- Manifestations due to low caloric intake: discuss
- 2- Manifestations due to low protein intake:
 - growth failure & growth retardation

According to the degree of weight loss, it is classified into 3 degrees:

 - First degree: wt loss bet. 15-25 % of the expected weight
 - Second degree: weight loss 25 35 %
 - Third degree: more than 35 %
 - Muscle wasting:
- 3- 4- 5- manifestation due to vitamin deficiency, mineral deficiency & low water intake: discuss
- 6- hungers: discuss

3. " Complications of marasmus " (oral)

Kwashiorkor

1. "clinical picture of kwashiorkor"

- Answer: discuss clinical picture of kwashiorkor.
* For pathogenesis, mention one pathogenesis for each item

NB:

- 1- Edema in kwashiorkor is required in question of: "DD of generalized edema"
- 2- Anemia in PEM is required in hematology

2. "Biochemical changes in kwashiorkor"

- Answer:
 - Laboratory finding: discuss
 - NO clinical picture, NO imaging

3. "Biochemical & pathological changes in kwashiorkor"

- Answer:
 - Biochemical changes: discuss laboratory finding
 - Pathological changes:
 - Fatty liver: discuss its pathogenesis from p.94. Book 1

4. "Differential diagnosis of kwashiorkor"

Rickets

1. "Types of rickets"

- Answer:
 - I. Vit D deficiency rickets: discuss etiology
 - II. Non Vit D deficiency rickets:
 - 1- renal rickets: discuss types
 - 2- Hepatic rickets: discuss
 - 3- Malabsorption: enumerate causes

2. "Clinical picture of rickets"

- Answer: enumerate
 - I. Skeletal Manifestations:
 - 1- head:
 - bossing
 - delayed closure of ant. Fontanel
 - delayed dentition
 - 2- Extremities: - broad ends of long bones.

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6. "treatment of rickets"

▪ Answer:

- Treatment of rickets: discuss
- Hypervitaminosis D:
 - Excessive intake of vit D (injections or prolonged daily administrations of 2000 IU)
 - C/P: vomiting

7. "Hypervitaminosis D"

- Answer: discuss hypervitaminosis D

8. "Renal rickets"

▪ Answer:

- Etiology:
 - Renal glomerular rickets: discuss
 - Renal tubular rickets: discuss
- Clinical picture:
 - Renal failure:
 - * Hypertension * anuria * growth failure
 - Rickets: discuss briefly as before
- Investigations:
 - impaired renal function
 - High urea & creatinine
 - Metabolic acidosis
 - For cause:
 - * Urine analysis:
 - Urine glucose
 - Phosphorous
 - Aminoaciduria
- Treatment: Treatment of vit D resistant rickets: active form of vit D (1, 25 dihydroxy cholecalciferol)

GENETICS

1. "numerical chromosomal abnormality"

■ Answer:

•Autosomal abnormalities

- trisomies : extra chromosome is present
e.g. Trisomy 13, 18

Trisomy 21 "DOWN syndrome gives a brief comment

Mental Retardation, simian crease, congenital heart disease

- monosomies : one chromosome is missing (monosomy : 21 -22)

•Sex chromosomal abnormalities:

- Klinefelter syndrome (47 xxy male): give a brief comment
- Poly y male: (47 xyy male).
- Poly x female (47 xxx female).
- Turner syndrome: (45 xo female): give a brief comment

•These syndromes are diagnosed by karyotyping

2. "structural chromosomal abnormalities"

■ Answer:

1. Translocation: define

- Down syndrome (translocation): give a brief comment

2. deletion : define

3. duplication : define

4. ring chromosome : define

5. inversion : define

6. isochromosome : define

•These cases are diagnosed by karyotyping

3. Clinical studies suspecting chromosomal abnormalities

- Answer: discuss clinical studies suspecting chromosomal abnormalities

Down

1. "DOWN syndrome"

- Answer: discuss Down syndrome

2. "Prenatal diagnosis of Down syndrome"

- Answer: discuss prenatal diagnosis of Down syndrome.

Sex Chromosomal Abnormalities

1. "sex chromosomal abnormalities"

■ Answer:

1. Turner syndrome: discuss

2. Klinefelter syndrome: discuss
 3. Polymale: (discuss is optional)
 4. Polymale: (discuss is optional)
- These syndromes are diagnosed by karyotyping.

Modes of Inheritance

1. "autosomal dominant inheritance"

- Answer: discuss autosomal dominant inheritance

2. "Autosomal recessive inheritance"

- Answer: discuss autosomal recessive inheritance

3. "x-linked dominant inheritance"

- Answer: discuss x-linked dominant inheritance

4. "X linked recessive inheritance"

- Answer: discuss x linked recessive inheritance

5. "Early diagnosis of single gene disorder by DNA study"

- Answer: discuss early diagnosis of single gene disorder by DNA study

6. "multifactorial inheritance"

- Answer:

- Definition: define

- Mechanism: discuss

- There is threshold value needed to develop disease, this value is determined by both genetic & environment factors.

- characters :

- The risk of recurrence of the disease: discuss

- Example:

- The risk of the first degree relative of someone with a neural tube defect is 4-5% whereas for second degree relations, the risk is 1-2 %. For 3rd degree relatives e.g. cousins close to the general population inheritance.

- Examples: enumerate.

- Most important examples:

- 1- Congenital malformations/disorders of infancy:

- Neural tube defect

- Congenital heart disease

- 2- Acquired disorders of childhood:

- Bronchial asthma

- Diabetes

- Epilepsy

- Hypertension

7. "genetic counseling"

- Answer: discuss genetic counseling

NEONATOLOGY

Resuscitation

1. "steps of resuscitation "

▪ Answer: discuss steps of resuscitation

I. Before delivery

1- Anticipation of problems by good history taking considering.

- enumerate one of the 2 examples
- Maternal risk factors e.g. hypertension

2- Preparation of:

- Equipments:

- * Radiant warmer
- * suction equipment like suction machine
- * Oxygen delivery equipment: bag and mask
- * Intubation equipment
- * Stethoscope

- Medications

- Personnel

II. During delivery

- observing for the type & duration of anesthesia, any problems e.g. meconium in amniotic fluid

III. After delivery: discuss

- i- airway : discuss
- ii- breathing : discuss
- iii- circulation : discuss
- iv- medication : discuss

2. " Reasons for failure of resuscitation "

▪ Answer: discuss of failure of resuscitation

3. " Drugs given during resuscitation "

▪ Answer: discuss drugs given during resuscitation

4. "Apgar score -oral question- "

Normal Newborn

1. " characteristics of normal newborn "

▪ Answer:

- Normal newborn: discuss
- Neonatal reflexes: discuss
- I. Moro reflex: discuss

II. Suckling reflex: discuss

III. Rooting, grasp, tonic neck, placing, stepping, Babinski's, landau reflexes:
enumerate or discuss if there is time

- routine care (neonatal screening) is NOT included

- background of neonatal reflexes is NOT included

2. " value of chest & heart examination normal newborn "

▪ Answer:

- Chest examination: discuss

- Breast examination: discuss

- Heart examination: discuss

- Vital signs (heart rate, respiratory rate & blood pressure): discuss

3. " Abdominal examination: in normal newborn "

▪ Answer:

- Abdominal examination: discuss

- Umbilical stump: discuss

- Genitalia: discuss

4. " Value of skin examination in normal newborn "

▪ Answer:

- Skin examination: discuss including physiological jaundice.

5. " Neonatal screening "

▪ Answer:

- Routine care:

- 1- Biochemical screening (very important): discuss

- Hypothyroidism: discuss it from "neonatal thyroid screening program, endocrinology. Page 143, book 2

- 2- Other general measures: discuss

Neonatal Reflexes

1. " Moro reflex "

▪ Answer:

- Background: discuss

- Moro reflex: discuss

2. " Tonic neck reflex "

▪ Answer:

- Background: discuss

- Tonic neck reflex: discuss

Classification of Newborn

1. "low birth weight newborn"

■ Answer:

- Definition: discuss
- Incidence: discuss
- Classification:
 - 1- LBW: appropriate for gestational age (Preterm): discuss
 - 2- LBW: small for gestational age: discuss

2. "clinical characteristics & complications of preterm"

■ Answer:

- Clinical picture (characteristics of preterm babies): discuss
- Complications:
 - Respiratory, neurological, abdominal, hematological: discuss
 - Metabolic problems:
 - Hypoglycemia: blood glucose less than 40 mg% in the first 72 hours of life
 - Hypocalcemia: serum Ca less than 7 mg %
 - Hypothermia: discuss
 - Hyperbilirubinemia: discuss
 - Nutritional: discuss
 - Retinopathy of prematurity

3. "Characters & complications of small for gestational age"

■ Answer:

- Clinical picture: discuss
- Complications: discuss

4. "large for gestational age"

■ Answer:

- Definition, etiology, complications: discuss
- Investigations:
 - At birth:
 - * Laboratory:
 - Blood sugar: for hypoglycemia
 - Blood Ca & Mg: for hypocalcemia
 - Hematocrit: for anemia
 - * imaging:
 - X ray for respiratory distress syndrome
 - Echocardiography
- Treatment:
 - Treatment of hypoglycemia:
 - * Discuss "Treatment of hypoglycemia, p. 63 book 1"

- Treatment of hypocalcemia:
 - * Discuss "Treatment of hypocalcemia, p.63, book 1"

Neonatal Hyperbilirubinemia

1. "Physiological jaundice"

▪ Answer:

- Definition, incidence, etiology, differentiation between physiological & pathological jaundice: discuss

2. "Causes of pathological unconjugated hyperbilirubinemia "

▪ Answer:

- Causes of pathological unconjugated hyperbilirubinemia: discuss (NO comment on physiological)
- Comment on:
 - Rh incompatibility: comment
 - ABO incompatibility: comment
 - Hemolytic anemia: comment
 - Breast milk jaundice: comment

3. "Diagnosis of a case of neonatal hyperbilirubinemia "

4. "Causes of jaundice depending on age of onset "

5. "Causes of jaundice in 1st day of life "

▪ Answer:

- Etiology:
 - Hemolytic disorder:
 - * RH incompatibility: comment from p .52, book 1
 - * ABO incompatibility: comment from p 52, book 1
 - * Hemolytic anemia: comment from p.54, book 1
- Investigations: discuss investigations
- Kernicterus: discuss
- Treatment: discuss

6. " Investigations of unconjugated hyperbilirubinemia "

▪ Answer: discuss investigations of unconjugated hyperbilirubinemia

7. " Investigations of neonatal hyperbilirubinemia "

▪ Answer:

- Investigations of unconjugated hyperbilirubinemia: discuss
- Investigations of conjugated hyperbilirubinemia: discuss from "cholestasis in hepatology p.88, book 2'

8. " Kernicterus "

▪ Answer:

- Definition, pathogenesis, etiology, manifestation, outcome: discuss

- Treatment:

- Urgent exchange transfusion: discuss principles
- Urgent phototherapy: discuss principles

9. "Phototherapy"

- Answer: discuss phototherapy

10. "Exchange transfusion"

- Answer: discuss exchange transfusion

11. "Complications of exchange transfusion"

- Answer: discuss complications of exchange transfusion

Neonatal Respiratory Distress

1. "Respiratory causes of neonatal respiratory distress"

- Answer:

- Respiratory:

- A- pulmonary:

- Respiratory distress syndrome: comment
- Meconium aspiration syndrome: comment
- Transient tachypnea of newborn: comment
- Pneumonia: comment
- Other causes: enumerate

- B- Extrapulmonary:

- Airway: enumerate
- Chest wall: enumerate

2. "Causes of neonatal respiratory distress"

- Answer:

- Respiratory:

- A- pulmonary:

- Respiratory distress syndrome: comment
- Meconium aspiration syndrome: comment
- Transient tachypnea of newborn: comment
- Pneumonia: comment
- Other causes: enumerate

- B- Extrapulmonary:

- Airway: enumerate
- Chest wall: enumerate

- Cardiac: enumerate

- Central: enumerate

- Metabolic: enumerate

-

3. "Risk factors for respiratory distress syndrome "

▪ Answer:

- Factors decreasing surfactant production: discuss
- Factors improving surfactant production: discuss

4. "Diagnosis of RDS "

▪ Answer:

- Clinical picture & investigations: mainly in premature infants
 - 1- SEVERE progressive respiratory distress SHORTLY after birth
 - 2- Auscultation: diminished air entry
 - 3- X ray: discuss reticulogranular pattern with air bronchogram
- Differential diagnosis: RDS should be differentiated from other causes of respiratory distress: enumerate other causes then
 - Transient tachypnea of the newborn: comment
 - Meconium aspiration syndrome: comment
 - Pneumonia: comment

5. "Management of RDS "

▪ Answer:

- Treatment: discuss
- Diagnosis: discuss as before

6. Comment on "Transient Tachypnea of Newborn" for:

- a- pulmonary causes of respiratory distress b- Diagnosis of RDS

▪ Answer:

- Mild self limited transient respiratory distress (tachypnea)
- Regressive course (improvement) within 2 days
- X ray: increased pulmonary vascular marking

7. Comment on "Meconium Aspiration Syndrome" for:

- a- Respiratory causes of respiratory distress
b- Diagnosis of RDS

▪ Answer:

- History of fetal distress
- Clinical picture: progressive distress, skin may be meconium stained
- X ray: patchy opacities of lung collapse

8. "Congenital pneumonia " comment

▪ Answer:

- Etiology: history of premature rupture of membranes
- Respiratory distress in 1st few hours after birth
- X ray: patchy opacities

9. "Neonatal apnea "

▪ Answer: discuss neonatal apnea

Neonatal seizures

1. "Causes of neonatal convulsions"

■ Answer:

- Common causes: discuss
- Less common causes: discuss
- More than one cause may exist on the same case e.g. sepsis associated with hypoglycemia, hypoxic ischemic encephalopathy associated with hypocalcemia

2. "Diagnosis of neonatal convulsions"

■ Answer:

- History of:
 - 1- trauma: may lead intracranial hemorrhage
 - 2- Delayed onset of crying
- Clinical Presentations: discuss
- Investigations: discuss

3. "Management of neonatal convulsions" "treatment of neonatal convulsions"

■ Answer:

- Treatment: discuss treatment: DOSES required
- Diagnosis: short comment if question is management

NB: Treatment of neonatal convulsions is the same as that of epilepsy except for the diazepam.

Neonatal Metabolic Disturbances

1. "hypothermia"

■ Answer:

- Definition: etiology, clinical Picture: discuss
- Treatment:
 - Gradual warming
 - Incubator care

Neonatal Hematological Disorders

1. "neonatal bleeding"

■ Answer:

- bleeding in healthy neonates
 - Hemorrhagic disease of newborn: discuss
 - Neonatal purpura: discuss
- Bleeding in sick neonates:

- 1- DIC
- 2- Neonatal septicemia : weak suckling, hypothermia
- 3- Neonatal liver disease
- investigations of neonatal bleeding in general : discuss

2. " Hemorrhagic disease of newborn "

▪ Answer:

- Etiology, incidence, clinical picture: discuss
- Investigations: discuss investigations of neonatal hemorrhage in general
- Differential diagnosis: discuss "neonatal bleeding"
 - I. bleeding in healthy neonate:
 - Neonatal purpura: discuss
 - II. Bleeding in sick neonates
 - 1- DIC
 - 2- Neonatal septicemia : weak suckling , hypothermia
 - 3- neonatal liver disease
- Treatment: discuss

3. " Causes of neonatal anemia "

▪ Answer: discuss causes of neonatal anemia

- I. physiological anemia of newborn: discuss
- II. Pathological anemia: discuss

4. " Neonatal anemia "

▪ Answer:

- Causes: discuss
- Investigations: enumerate investigations from "neonatal pathological jaundice p .54, book 1"
 - Blood picture - **Hematocrit**
 - WBC - **Blood grouping: Rh & ABO**
 - Enzyme assay - **Thyroid profile**
- Treatment:
 - Treatment of causes: e.g. septicemia
 - Packed RBC's or blood transfusion

Neonatal Infections

1. " complications of rubella "

- Answer: discuss them from congenital rubella syndrome

Neonatal septicemia

1. "management of neonatal septicemia"

■ Answer:

•Diagnosis:

- Clinical picture: discuss
- Investigations: discuss
- Complications: discuss

•Treatment: discuss

Birth Injuries

1. "intracranial hemorrhage"

Answer: discuss intracranial hemorrhage

GROWTH & DEVELOPMENT

1. Define growth, define development & mention 3 examples of both

■ Answer:

•Growth: define

•Development: define

•3 examples of growth : enumerate 3 examples as

- Weight , length , teeth eruption ,epiphyseal growth

•3 examples of development : enumerate 3 examples as

- From motor development : sitting , standing ... etc

2. Factors affecting growth & development

3. Factors affecting physical growth

■ Answer :

•prenatal factors :discuss

•postnatal factors : discuss

4. Weight

■ Answer : discuss OUTLINE of weight

•At birth : 2.5-4.25 Kg (average 3 Kg)

•During the first year of life :

- First 4 months : 3/4 Kg /month

- * 4 months: double birth weight - 6.000 Kg

- Second 4 months : 1/2 Kg /month

- Third 4 months : 1/4 Kg /month

- * 12 months: three times birth weight - 9.000 Kg

- During early childhood 2-6 years : 2 Kg / year [Weight = (Age X 2) + 8]
- During late childhood 6-12 years : 2.5 Kg /year

5. **Length / height**

- Answer :
 - Length/height: discuss outlines
 - Body proportions (upper segment / lower segment):
 - u/l ratio at birth : 1.7/1
 - u/l ratio at 3 years: 1.3/1
 - u/l ratio at 7 years: 1.0 /1 (upper & lower segments are equal)

6. **Head circumference**

- Answer :discuss head circumference.

7. **Dentition**

- Answer :
 - dentition : discuss
 - Causes of delayed dentition :
 - Rickets
 - Osteogenesis imperfecta
 - Cretinism
 - Down syndrome

8. **" Growth curve " " Percentile Growth curve "**

- Answer :discuss growth curve
 - Definition : discuss
 - Why growth curve are essential ? : discuss
 - Criteria of curves : discuss or draw a simple diagram illustrating these criteria
 - Normal child percentile curves : discuss

9. **Gross motor developmental skills**

- Answer :discuss gross motor developmental skills

10. **Fine motor developmental skills**

- Answer :discuss fine motor developmental skills

11. **Social development**

- Answer :discuss mental development during infancy [social development]

12. **Motor & mental development in the 1st year**

- Answer :discuss motor & mental development in 1st year from 1 st table page 10 , book 1

Abnormal Growth & Development

1. **Microcephaly**

- Answer :
 - Def. : discuss

- Etiology : discuss , similar to that of "mental retardation,neurology,book2" +primary [genetic]
- Clinical evaluation , Investigations : discuss
- 2. Craniotables
- 3. Macrocephaly
- 4. Short stature
 - Answer :discuss short stature
- 5. Differences bet. Familial short stature & constitutional delay of growth & puberty
 - Answer :discuss Familial short stature, constitutional delay of growth & puberty
- 6. Causes of short stature
 - Answer :discuss causes / etiology of short stature
- 7. Endocrinal causes of short stature
 - Answer :
 - Endocrinal causes of short stature : discuss
 - Investigations of endocrinal causes of short stature : discuss items of investigations related to endocrinal causes.
- 8. Investigations of a case of short stature
 - Answer :
 - History : discuss
 - Examination : discuss
 - Investigations : discuss
- 9. Tall stature
 - Answer : discuss tall stature
- 10. " Under weight " from marasmus

CARDIOLOGY

Rheumatic Fever

1. " Diagnosis of rheumatic fever "
 - Answer :
 - Diagnosis of rheumatic fever is based on MODIFIED JONES CRITERIA:
 - The presence of 2 major criteria or 1 major & 2 minor criterias in presence of evidence of recent streptococcal infection.
 - Major criteria:
 1. Polyarthritis: comment
 - Polyarticular
 - Affecting large joints e.g. knee
 - Affecting joints are inflamed
 - Migratory

- Dramatic response to salicylates
- It leaves the joints completely free
- 2. Carditis:
 - pericarditis: precordial pain
 - myocarditis:
 - muffled heart sounds
 - Tachycardia
 - Heart failure
 - Endocarditis:
 - Affection of Lt sided heart valves
 - Mitral valve affection: more common. Pansystolic murmur at the apex.
 - Aortic valve regurge: early diastolic murmur along the Lt parasternal border.
- 3. Chorea
 - * Choreic movement: involuntary, static, irregular, dysrhythmic sudden jerky pseudopurposal movements of any part of the body.
 - * Hypotonia
 - * Emotional liability
- 4. Erythema marginatum
 - Red non purpuric macules mainly on limbs & trunk
- 5. Nodules:
 - Small nodules, hard, freely mobile, painless
- Minor criteria: enumerate
- Evidence of recent streptococcal infections: enumerate

2. " Rheumatic carditis "

■ Answer:

- Carditis: discuss
- Major criteria: enumerate
 - Carditis is one of major criteria for diagnosis of rheumatic fever (Modified Jones criteria)
 - Diagnosis of rheumatic fever is based on 2 major criteria (which carditis may be one of them) OR carditis & 2 minor criteria.
- Differential diagnosis of carditis : discuss from DD
- Treatment of carditis :
 - Carditis without cardiomegaly: discuss
 - Carditis with cardiomegaly or failure: discuss
 - Treatment of complications (heart failure): discuss

3. " Rheumatic chorea "

■ Answer:

- Chorea: discuss
- Major criteria: enumerate
 - Chorea is one of the major criteria of modified Jones criteria for diagnosis of rheumatic fever

- Diagnosis of rheumatic fever is based on 2 major criteria (which chorea may be one of them) OR chorea & 2 minor criteria.

• DD of chorea: discuss from DD

• Treatment of chorea: discuss

4. "Investigations of rheumatic fever"

▪ Answer: discuss investigations of rheumatic fever

5. "Treatment of rheumatic fever"

▪ Answer: discuss treatment of rheumatic fever including prevention

* DOESSES are required

6. "Prevention of rheumatic fever"

▪ Answer: discuss prevention of rheumatic fever

* DOESSES are required

Congenital Heart Disease

1. "Classification of congenital heart diseases"

▪ Answer:

• Acyanotic congenital heart lesions

* enumerate 5 diseases

• Cyanotic congenital heart lesions

* enumerate 5 diseases

Tetralogy of Fallot

1. "Treatment of cyanotic spells"

▪ Answer: discuss treatment of cyanotic spells

2. "Complications of Fallot"

▪ Answer: discuss complications of Fallot

Transposition of Great Arteries

Ventricular Septal Defect

Atrial Septal Defect

Patent Ductus Arteriosus

1. "Clinical picture of Patent Ductus Arteriosus"
 - Answer:
 - History: discuss as VSD
 - Examination: as aortic regurge

Coarctation of Aorta

1. "Clinical picture of coarctation of aorta"
 - Answer: discuss clinical picture of coarctation of aorta

Congenital Aortic Stenosis

Infectious Endocarditis

1. "Infectious Endocarditis"
 - Answer: discuss infective endocarditis
2. "Management of infective endocarditis"
 - Answer:
 - History, examination, investigations: discuss
 - Treatment: discuss DOSES are required.

Clinical Presentations of Cardiac Diseases

1. "murmurs"
 - Answer: discuss murmurs
2. "Innocent cardiac murmurs"
 - Answer:
 - Definition, etiology, characters: discuss
 - Types:
 - 1- Classic vibratory murmurs: discuss it in paragraph
 - 2- Physiologic pulmonary flow murmur: discuss it in paragraph
 - 3- Venous hum: discuss it in paragraph

- Differential diagnosis from organic murmurs: discuss characters of organic murmurs

3. "Causes of central cyanosis "

- Answer:

- Definition: discuss

- Etiology:

- Congenital cyanotic heart diseases: enumerate 5 examples

- 1- Fallot tetralogy: comment on (optional)

- 2-3-4-5 enumerates

- Acute respiratory failure: enumerate from "Emergency"

- 1- Acute severe asthma: comment on (optional)

- Presentation: discuss

RESPIRATORY

Bronchial Asthma

1. "Asthma triggers "

- Answer: discuss the 5 points of asthma triggers

2. "Diagnosis of bronchial asthma "

- Answer: discuss diagnosis of bronchial asthma

3. "Causes of wheezes" " differential diagnosis of wheezes"

- Answer:

- Single wheezing:

- Acute bronchiolitis:

- * The commonest cause in infancy

- * preceded by upper respiratory tract infection (viral infection)

- * Not recurrent

- Foreign body inhalation:

- * Sudden onset of cough

- * choking

- * No response to bronchodilators

- Severe bronchopneumonia: comment

- Organic phosphorous poisoning: comment

- Chronic or recurrent wheezing:

- Bronchial asthma:

- * The most common cause

- * diagnosis of bronchial asthma is clinical & depends on reliable history of repeated attacks of wheezes & cough after exclusion of other less common causes of wheezes .

- * Examination:

- During attack:

- Auscultation:

- * Harsh vesicular breathing with prolonged expiration.

- * Expiratory wheezes

- In between the attacks: the patient is free

- Recurrent aspiration: comment

- Foreign body (not removed).

- Chronic or recurrent infections: comment

- Congenital anomalies or compression of the airways by lymph nodes most commonly due to TB: TB toxemia, night sweating, anorexia, loss of weight.

4. " Clinical grading of acute asthma "

- Answer: discuss clinical grading of acute asthma (assessment of severity of acute attack)

5. " Management of bronchial asthma "

- Answer: discuss management of bronchial asthma p .21, 22, book 2

6. " management of acute asthma" "management of acute attack of bronchial asthma"

- Answer:

- Treatment of acute attack: DOSES are required

- Diagnosis:

- Write a short comment on bronchial asthma:

- * The most common cause of chronic or recurrent wheezing

- * diagnosis of bronchial asthma is clinical & depends on reliable history of repeated attacks of wheezes & cough after exclusion of other less common causes of wheezes .

- * Examination:

- During attack:

- Auscultation:

- * Harsh vesicular breathing with prolonged expiration.

- * Expiratory wheezes

- In between the attacks: the patient is free

- Clinical grading of acute asthma: discuss or write a summary

7. " Management of acute severe asthma "

- Answer:

- Acute severe asthma: discuss it from "clinical grading of acute asthma, p 20, book2

- Management of acute severe attack: discuss

- Preventive treatment is NOT required.

8. " Prevention of bronchial asthma "

- Answer:

- Preventive treatment in between attack: Discuss, DOSES are OPTIONAL

- Avoidance of triggering stimuli: give example
- Patient & family education about: discuss

Nasopharyngitis

1. "Nasopharyngitis"

Tonsillitis

1. "Tonsillitis"

Otitis Media

1. "Otitis media"

Acute Bronchitis

1. "Acute bronchitis"

■ Answer:

- Incidence, etiology: discuss
- Clinical picture:
 - Initial stage of nasopharyngitis
 - Followed by dry cough & chest discomfort (for few days)
 - Later on, cough becomes productive cough, by auscultation harsh vesicular breathing.
 - In convalescent stage, cough decline in frequency & severity
- Differential Diagnosis: discuss as DD of cough
- Treatment: discuss

2. "Causes of cough"

■ Answer:

- Acute cough: duration less than 2 weeks
 - Without respiratory distress:
 - Acute bronchitis: comment
 - * Initial stage of nasopharyngitis
 - * Followed by dry cough & chest discomfort (for few days)
 - * Later on, cough becomes productive cough, by auscultation harsh vesicular breathing.
 - * In convalescent stage, cough decline in frequency & severity

- Acute laryngitis: croupy cough & may be stridor
- Acute sinusitis
- With respiratory distress:
 - Acute bronchiolitis:
 - * During infancy, viral infection preceded by upper respiratory tract infection
 - * sneezing, nasal discharge, wheezing, respiratory distress
 - Acute asthma:
 - * diagnosis of bronchial asthma is clinical & depends on reliable history of repeated attacks of wheezes & cough after exclusion of other less common causes of wheezes .
 - * Examination:
 - During attack:
 - Auscultation:
 - * Harsh vesicular breathing with prolonged expiration.
 - * Expiratory wheezes
 - In between the attacks: the patient is free
 - Pneumonia:
 - * Fever, bronchial breathing, creptations
- Prolonged cough: duration is 2 weeks to 2 months:
 - Complicated bronchitis: comment
 - Sinusitis
 - Pertussis & pertussis like illness
 - * Pertussis: severe sporadic successive croups, ending in inspiratory whooping or vomiting.
 - * Pertussis like illness: by adenovirus
- Chronic cough: duration more than 2 months
 - Chronic infection: e.g. pulmonary TB: TB toxemia, night fever, night sweating, loss of weight, loss of weight, anorexia & may be other symptoms; hemoptysis and wheezes
 - Chronic asthma.
 - Recurrent aspiration (tracheoesophageal fistula, gastroesophageal reflux): cough & wheezes since birth.

Acute Bronchiolitis

1. " Acute bronchiolitis "
 - Answer: discuss acute bronchiolitis
2. " Treatment of acute bronchiolitis "
 - Answer: discuss Treatment of acute bronchiolitis
3. " management of acute bronchiolitis "
 - Answer: discuss clinical picture, differential diagnosis & treatment of acute bronchiolitis

Pneumonia

1. "Diagnosis of pneumonia"
 - Answer: discuss diagnosis of pneumonia
2. "Treatment of pneumonia"
 - Answer: discuss treatment of pneumonia

Lung Suppurations

1. Bronchiectasis
2. Lung abscess
3. Emphysema

Tuberculosis

1. "Fate of primary pulmonary complex"
 - Answer: discuss fate of primary pulmonary complex
2. "Clinical picture of pulmonary TB"
 - Answer: discuss clinical picture of pulmonary TB
3. "Extrapulmonary TB"
 - Answer:
 - 1- Abdominal TB:
 - TB enteritis
 - Chronic diarrhea with bleeding
 - TB peritonitis
 - Ascites
 - Caseous
 - Adhesive
 - Encysted
 - Tuberculous mesenteric lymphadenitis (Tabes mesenterica)
 - Urogenital TB:
 - Urine analysis reveals sterile pyuria
 - 2- Skeletal TB:
 - TB of the spine (Pott disease)
 - Lower thoracic vertebrae followed by lumbar
 - Pain, kyphosis & compression paraplegia
 - TB arthritis:
 - Large joints

- Pain with limitation of movement

3- TB of the CNS

- TB meningitis:
 - Headache, irritability, disorientation,
 - Convulsions & focal neurological deficits
 - CSF: increased protein & lymphocytes, decreased glucose & chloride.
- Tuberculoma:
 - Space occupying lesions.

4- TB lymphadenitis:

- Cervical lymph nodes are most commonly affected
- Initially lymph nodes are discrete, mobile, then
- Nodes are matted & adherent to the deep structures with cold abscess formation.

5- Other types:

- TB pericarditis
- TB of the skin
- TB of the eye & ear

4. " Laboratory investigations of TB "

▪ Answer:

- Tuberculin test: discuss
- Other laboratory investigations: discuss

5. " prevention of TB "

▪ Answer:

- 1- General & community measures: discuss
- 2- Specific prevention:
 - BCG vaccine: discuss it from "immunization p .129, 130, book 1
 - Chemotherapy: discuss

6. " Treatment of TB "

▪ Answer: discuss Treatment of TB

HEMATOLOGY

1. "Hemopoietic factors " "factors controlling erythropoiesis"

■ Answer:

1- Nutritional requirements

- Minerals:
 - Iron:
 - * Function: for synthesis of heme
 - * Regimen: 10 mg
 - * Deficiency: Microcytic hypochromic anemia
- Vitamins:
 - Vitamin B12 & folic acid:
 - * Function: coenzyme for DNA synthesis
 - * Deficiency: megaloblastic anemia
- Proteins:
 - * Function: for synthesis of globin
 - * Deficiency: PEM anemia
- Trace elements: copper, cobalt

2- Hypoxia: discuss

3- Hormones: discuss

4- Hemopoietic growth factors

2. " Nutritional factors essential for hemopoiesis "

- Answer: discuss nutritional factors essential for hemopoiesis as above

3. " Types of hemoglobin "

■ Answer:

- Normal hemoglobin: discuss
- Abnormal hemoglobin: discuss hemoglobin S from "etiology, pathogenesis & presentation of sickle cell anemia"

4. " Etiology of anemia ""classification of anemia " " types of anemia "

- Answer: discuss classification of anemia

5. " Clinical picture of anemia "

- Answer: discuss clinical picture of anemia.

- General clinical picture of anemia: discuss
- Clinical picture specific for each type of anemia:
 - Chronic hemolytic anemia:
 - * Jaundice, hepatomegaly, splenomegaly, mongoloid features & blood transfusion: discuss them for clinical picture of thalassemia
 - Acute hemolytic anemia:

* Sudden pallor, sudden jaundice, dark urine (hemoglobinuria).

* History of intake of oxidizing agent: enumerate them from G6PD , page 51
Book 2

- Iron deficiency anemia: irritability, anorexia & pica.

Thalassemia

1. " complications of thalassemia "

▪ Answer: discuss complications of thalassemia

2. " investigations of thalassemia "

▪ Answer: discuss investigations of investigations

3. " Treatment of thalassemia "

▪ Answer:

1. Correction of anemia: discuss
2. Removal & prevention of iron overload by iron chelating agent: discuss
3. Splenectomy: discuss
4. Recent treatment: discuss, do not forget it

Sickle Cell Anemia

1. "clinical picture of sickle cell anemia "

▪ Answer:

- Onset: discuss
- General clinical picture of chronic hemolytic anemia:
 - discuss details & explanation of general clinical picture from "clinical picture of anemia p.44, book 2
 - except that the spleen initially enlarges but repeated episodes of infarction cause its fibrosis by age 5-6 years (autosplenectomy)
- Crises: discuss

2. " types of crisis "

▪ Answer: discuss types of crisis

3. " Treatment of sickle cell anemia "

4. " sickle cell trait "

Acute Hemolytic Anemia

1. " causes of acute hemolytic anemia "

■ Answer:

- I. Glucose -6- phosphate dehydrogenase deficiency (G6PD): discuss if you have time
- II. Other causes: discuss

2. " glucose 6 phosphate dehydrogenase deficiency "**■ Answer:**

- G6PD: discuss
- G6PD should be differentiated from other causes of hemolytic anemia: discuss other causes of acute hemolytic anemia.

3. " possible investigations in acute hemolytic anemia "**■ Answer:**

- Investigations of G6PD: discuss
- Investigations of other causes of acute hemolytic anemia
 - 1- Hemolytic uremia: thrombocytopenic & impaired renal functions tests
 - 2- Crises of chronic hemolytic anemia: splenomegaly,
 - 3- Autoimmune hemolytic anemia: splenomegaly, marked reticulocytosis, +ve Coombs test.
 - 4- RH & ABO incompatibility
 - 5- Infections or sepsis: high ESR & positive CRP
 - 6- Metabolic hemolytic anemia: e.g. Wilson disease: Cu level & ceruloplasmin

Iron Deficiency Anemia

1. " Etiology of iron deficiency anemia "

- Answer: discuss etiology of iron deficiency anemia

2. " clinical picture of iron deficiency anemia "**■ Answer:**

- General clinical picture of anemia: discuss
- Specific Manifestations of iron deficiency: discuss

3. " diagnosis of iron deficiency anemia "**■ Answer:**

- Clinical picture of iron deficiency anemia: discuss
- Differential diagnosis from other causes of microcytic hypochromic anemia: discuss

4. " investigations of iron deficiency anemia "

- Answer: discuss investigations of iron deficiency anemia

5. " Treatment of iron deficiency anemia "**■ Answer:**

- Prevention: discuss
- Specific treatment: discuss DOSES are required
- Supportive treatment: discuss

Parasitic Anemia

1. "Parasitic anemia"

■ Answer:

- Etiology: discuss
- Pathogenesis: discuss (optional)
- Clinical picture:
 - Clinical picture of iron deficiency anemia:
 - General clinical picture of anemia: discuss briefly
 - Clinical picture specific: irritability, anorexia, pica, pallor, easy fatigue
 - Clinical picture of parasitism e.g. abdominal pain, weight loss
- Investigations:
 - Investigations of iron deficiency anemia
 - * Blood picture: hemolytic hypochromic anemia
 - * Blood chemistry:
 - decreased serum iron
 - increased serum iron binding capacity
 - decreased serum ferritin
 - Investigations of parasitism e.g. stool analysis, urine analysis.
- treatment:
 - Treatment of iron deficiency anemia: discuss ORAL specific treatment of iron deficiency anemia.
 - bilharziasis (praziquantil)
 - Ancylostoma (mebendazole)
 - Well balanced diet
 - Blood transfusion may be indicated in severe cases.

Anemia in Protein Energy Malnutrition

1. "Anemia in protein caloric malnutrition"

■ Answer:

- Etiology: discuss as "mechanism of anemia, in variable manifestations of kwashiorkor, p94, book 1"
- Clinical picture:
 1. Clinical picture of protein caloric malnutrition: enumerate "clinical picture of kwashiorkor, p 93, 94, book 1"
 2. Clinical picture of anemia: enumerate
- Investigations:

1. To diagnose anemia: complete blood picture
 2. to diagnose the type: serum iron, iron binding capacity.
Anemia may be:
 - * microcytic hypochromic anemia (iron deficiency anemia)
 - * megaloblastic anemia (folic acid deficiency)
 - * normocytic normochromic anemia (infection, sepsis)
 3. serum folic acid, vitamin B12 assay, serum protein
- Treatment:
1. Treatment of protein caloric malnutrition:
 - * High protein diet:
 - Dose: 4-6 gm /kg / day
 - By nasogastric tube
 - Soy based lactose free formula
 - * Milk in young non weaned non weaned infants
 - * Balanced diet: in older weaned infants
 - * Treatment of infections
 2. Treatment of anemia:
 - * Oral iron therapy
 - * Packed RBC's OR whole blood transfusion based on condition
 - * Folic acid, vitamin B12: DOES are NOT required

Purpura

1. " Etiology of purpura "

▪ Answer:

- I. thrombocytopenia purpura: discuss as below
- II. NON thrombocytopenic purpura: discuss

2. " Causes of thrombocytopenic purpura "

▪ Answer:

1. Increased destruction:
 - Immune: enumerate
 - Immune thrombocytopenic purpura:
 - * Onset is acute, 1-2 weeks after a viral infection in 60-80 % of cases
 - * Anemia due to blood loss
 - * The liver and the spleen are usually NOT enlarged
 - * Investigations:
 1. Blood picture:
 - Thrombocytopenia
 - Anemia if there is significant blood loss
 - Antiplatelet antibodies
 2. Bone marrow examination:
 - Normal or increased megakaryocyte with defective bleeding
 - Non immune: enumerate

2. Decreased production:

- Bone marrow depression: enumerate
 - Aplastic anemia
 - * Def: aplasia of the precursors of the 3 blood elements in the bone marrow leading to pancytopenia in the peripheral blood (anemia, purpura & infections).
Splenomegaly & lymphadenopathy are ABSENT
 - * Congenital: (Fanconi's anemia)
 1. General manifestations:
 - Skeletal anomalies: microcephaly
 - microphthalmia and generalized hyperpigmentation
 2. Hematological manifestations:
 - Present usually above the age of years
 - * Acquired aplastic pancytopenia :
 - Etiology:
 - Idiopathic
 - Infections: e.g. hepatitis
 - Drugs: chloramphenicol
 - Bone marrow infiltration: enumerate
 - Leukemia:
 - * Manifestations due to bone marrow infiltration:
 - Anemia, purpura, prolonged fever, arthralgia
 - Manifestations due to organs infiltrations:
 - Splenomegaly, hepatomegaly & lymphadenopathy
 - Deficiency: enumerate

3. " Causes of Non thrombocytopenia purpura "

- Answer: discuss causes of NON thrombocytopenic purpura

Immune Thrombocytopenic Purpura

1. " Immune thrombocytopenic purpura "

- Answer: discuss ITP

2. " Clinical picture , investigations ,DD of ITP "

- Answer: discuss clinical picture, investigations, DD of ITP

3. " differential diagnosis of purpura "

- Answer:
 - Comment on ITP, aplastic anemia, leukemia as before
 - Enumerate other causes

4. " treatment of immune thrombocytopenic purpura "

- Answer:
 - I. Mild cases: Discuss
 - II. Moderate & severe cases

- Hospitalization
- Discuss treatment of moderate & severe cases

5. "clinical picture of Immune thrombocytopenia purpura "

▪ Answer:

- * Onset is acute, 1-2 weeks after a viral infection in 60-80 % of cases
- * Anemia due to blood loss
- * The liver and the spleen are usually NOT enlarged
- * Investigations:
 1. Blood picture:
 - Thrombocytopenia
 - Anemia if there is significant blood loss
 - Antiplatelet antibodies
 2. Bone marrow examination:
 - Normal or increased megakaryocyte: with defective bleeding

Aplastic Anemia

1. " Aplastic anemia "

- Answer: discuss aplastic anemia

2. Comment on " Aplastic anemia "

▪ Answer:

- * Def: aplasia of the precursors of the 3 blood elements in the bone marrow leading to pancytopenia in the peripheral blood (anemia, purpura & infections). Splenomegaly & lymphadenopathy are ABSENT
- * Congenital: (Fanconi's anemia)
 1. General manifestations:
 - Skeletal anomalies: microcephaly
 - microphthalmia and generalized hyperpigmentation
 2. Hematological manifestations:
 - Present usually above the age of years
- * Acquired aplastic pancytopenia :
 - Etiology:
 - Idiopathic
 - Infections: e.g. hepatitis
 - Drugs: chloramphenicol

Leukemia

1. " clinical picture & investigations of leukemia "

▪ Answer:

- Clinical picture: discuss or give summary

- Investigations: discuss

2. "treatment of leukemia"

Hemophilia

1. "classic hemophilia" "hemophilia A"

■ Answer:

- Definition: coagulation disorder due to deficiency of factor VIII
- Incidence of hemophilia A : 80 % - (1/4000 males)
- Etiology: discuss
- Clinical picture of hemophilia A: discuss clinical picture
Large age of onset in hemophilia B
- Investigations:
 - Coagulation tests: discuss
 - Coagulation factors: assay
 - * Factor VIII: discuss
 - * Factor XI deficiency
- Deficiency diagnosis: hemophilia differentiated from:
 - * Von willebrand disease: autosomal dominant, prolonged bleeding time & clotting time.
 - * acquired coagulation defect e.g. liver cell failure & DIC
- Treatment: discuss

2. "Hemophilia B"

- Answer: discuss items with focusing on hemophilia B with the same clinical picture & treatment.

3. "Treatment of hemophilia"

- Answer: discuss treatment of hemophilia

Gastroenterology

Vomiting

1. " Neonatal vomiting "

▪ Answer

- Neonatal vomiting: discuss
- Treatment
 1. Treatment of cause
 2. Antiemetic drugs as metoclopramid & demperidon
Doses not needed

2. " vomiting in infancy&childhood "

▪ Answer

* Causes:

• Medical

- Overfeeding or irregular feeding
- Increase intracranial tension as brain tumors, CNS infections
- Systemic infectious disease
- Systemic & metabolic disorders:
 - Diabetic ketosis: dehydration, acidosis, abdominal pain ,polyuria
(Comment from abdominal pain P.75 book 2)
 - Chronic renal failure: hypertension, anuria, growth failure
(Comment from renal rickets p 104 book 2)
 - aminoacidopathy
 - hypervitaminosis D : polyuria , constipation, calcification , renal stones

• Surgical: discuss

* Treatment:

1. Treatment of the cause
2. antiemetic drugs as metoclopramide, domiperidone, DOSES are NOT required

Painful Oral Lesions

1. " MONILIAL STOMATITIS "

▪ Answer: discuss monilial stomatits

2. " HERPITIC GINGIVOSTOMATITIS "

▪ Answer: discuss herpetic gingivostomatitis

3. HERPANGINA

Diarrhea

1. Etiology of diarrhea

▪ Answer

- Acute diarrhea: discuss causes
- Persistent diarrhea: discuss causes
- Chronic diarrhea: discuss as below

2. Causes of acute diarrhea

▪ Answer

- Infective diarrhea (gastroenteritis) discuss causes
- Non infective: discuss causes

3. Chronic diarrhea

▪ Answer

- Infections
 - Tuberculosis: chronic diarrhea with bleeding & tenesmus & malabsorption
 - Diagnosis & treatment: discuss briefly if have time
- Malabsorption: cystic fibrosis - celiac disease - chronic cholestasis (chronic malabsorption)

Gastroenteritis

1. Pathophysiology of gastroenteritis

▪ Answer

- Pathophysiology: discuss
- Biochemical changes in severe gastroenteritis: discuss (optional)

2. Clinical diagnosis of gastroenteritis

- Answer: Discuss clinical diagnosis of gastroenteritis

3. Diagnosis of gastroenteritis

▪ Answer:

- Clinical diagnosis discuss
- Investigations: discuss

4. Complications of severe gastroenteritis

- Answer: Discuss "the presence of complications possible in severe cases" (10 complications)

5. Investigation of gastroenteritis

- Answer: Discuss investigations of gastroenteritis

6. " Oral treatment of gastroenteritis " " treatment of mild to moderate cases of gastroenteritis " " home management of gastroenteritis "

- Answer: discuss home management, mild to moderate cases of gastroenteritis

- Prevention & treatment of water and electrolyte imbalance by ORS: discuss
- Feeding: discuss
- Treatment of infections: discuss
- Symptomatic treatment: discuss

7. Oral rehydration solution

- Answer: Discuss prevention & treatment of water and electrolytes imbalance by ORS

8. " Intravenous rehydration " " management of sever complicated cases of gastroenteritis " " hospital management of gastroenteritis "

- Answer:
 - Treatment:
 - Indication: discuss
 - Intravenous rehydration: discuss
 - Treatment of complications: discuss
 - Diagnosis:
 - Severe (grade III) dehydration: discuss it from table of degree of dehydration P73 book 2

9. Clinical picture of different types of dehydration

- Answer
 - Clinical picture of isotonic dehydration: discuss
 - Clinical picture of hypotonic dehydration: discuss
 - Clinical picture of hypertonic dehydration: discuss

10. Isotonic dehydration

- Answer
 - Definition: discuss definition of dehydration
 - Incidence, pathophysiology, etiology, clinical picture, investigations of isotonic dehydration: discuss
 - Treatment:
 - ORS: * in mild to moderate cases
 - * Discuss doses
 - Intravenous rehydration:
 - * In sever cases
 - * Comment briefly

Persistent Diarrhea

1. Persistent diarrhea

- Answer: discuss persistent diarrhea

2. Causes of persistent diarrhea

- Answer

1. Sugar intolerance (lactose intolerance) discuss
 2. Cow's milk protein allergy: discuss
 3. Bacterial overgrowth in upper intestine: discuss
 4. Persistent infections as giardia lamblia & entamoeba histolytica
3. Treatment of persistent diarrhea
- Answer: discuss treatment of persistent diarrhea

Acute Abdominal Pain

1. Acute abdominal pain
 - Answer: discuss acute abdominal pain
2. Dysfunctional recurrent abdominal pain
 - Answer: discuss dysfunctional recurrent abdominal pain
3. Organic recurrent abdominal pain
 - Answer: discuss organic recurrent abdominal pain

Acute Abdominal Masses

1. Acute abdominal masses
 - Answer: discuss acute abdominal masses
2. Chronic abdominal masses
 - Answer: discuss Chronic abdominal masses
3. Neuroblastoma
 - Answer
 - Incidence & clinical picture: discuss
 - Investigations: discuss them from investigations of abdominal masses in P.81 book 2
 - Treatment: surgical removal of tumor & good prognosis if diagnosed early & unilateral
4. Wilms tumor
 - Incidence & clinical picture: discuss
 - Investigations: discuss them from investigations of abdominal masses in P.81 book 2
 - Treatment: surgical removal of the tumor & good prognosis if diagnosed early & unilateral

HEPATOLOGY

Viral Hepatitis

1. Etiology of hepatitis
 - Answer: discuss aetiology of hepatitis
2. Diagnosis of hepatitis
 - Answer:
 - I. Diagnosis of clinical type of acute hepatitis: discuss
 - II. Diagnostic investigations of acute hepatitis: discuss
 - III. Diagnosis of the causative virus: discuss
3. Clinical types of hepatitis
 - Answer: discuss diagnosis of clinical types of acute hepatitis
4. Diagnostic investigations of acute hepatitis
 - Answer:
 - Diagnostic investigations of acute hepatitis
 - To prove acute hepatitis: discuss
 - To prove acute hepatic failure (in fulminant hepatitis): discuss-
 - Diagnosis of causative virus
 - Laboratory differentiations (hepatitis markers): discuss only
5. Diagnosis of clinical forms of acute hepatitis
 - Answer: discuss diagnosis of clinical types of acute hepatitis
6. Clinical diagnosis of acute hepatitis
 - Answer:
 - Diagnosis of clinical types of acute hepatitis: discuss
 - Diagnosis of causative virus:
 - Clinical differentiations: discuss only
7. Diagnostic investigations of acute hepatic failure
 - Answer: discuss diagnostic investigations of acute hepatic failure "to prove acute hepatic failure in fulminant hepatitis"
8. Laboratory differentiation between different types of hepatitis
 - Answer: discuss laboratory differentiation between different types of hepatitis (hepatitis markers)
9. Prevention of hepatitis
 - Answer:
 - Prevention of hepatitis A: discuss
 - Vaccination: discuss it from "P132 book 1"
 - Prevention of hepatitis B: discuss

- Vaccination: discuss it from "p 129,131 book 1"

10. Viral hepatitis: long

- Answer: discuss viral hepatitis

Chronic Hepatitis

1. Causes of chronic hepatitis

- Answer: discuss causes of chronic hepatitis

2. Clinical picture & investigations of chronic hepatitis

Cholestasis

1. Etiology of cholestasis

- Answer: discuss etiology of cholestasis

2. Clinical picture of cholestasis

3. Investigations of cholestasis

- Answer: discuss investigations (laboratory approach) of cholestasis

4. Treatment of cholestasis

- Answer: discuss treatment of cholestasis

Portal Hypertension

1. Etiology of portal hypertension

- Answer: discuss anthology of portal hypertension

2. Clinical picture of portal hypertension

3. Investigations of portal hypertension

4. Treatment of portal hypertension

- Answer: discuss treatment of portal hypertension

Veno-Occlusive Disease

1. Veno-occlusive disease

Answer: discuss veno-occlusive disease

Clinical Presentation of Liver Disease

1. Causes of hepatomegaly

■ Answer

* Causes:

• Infections:

- Viral (hepatitis): comment
- Bacterial (liver abscess), parasitic (bilharziasis)

• Congestion:

- VOD: comment
- Heart disease (constrictive pericarditis, congestive heart failure): discuss

• Metabolic: glycogen storage disease, Wilson disease

• Malignancy:

- Neuroblastoma, liver tumors (hepatoma & hepatoblastoma)
- Leukemia: comment

* Investigations: discuss investigations of liver diseases & hepatosplenomegaly in general
p 95 book 2

2. Liver cell failure

■ Answer:

• Causes:

- Causes of acute liver cell failure: viral infections especially hepatitis c virus
- Causes of chronic liver cell failure: discuss causes of liver cirrhosis

• Clinical picture:

- Clinical picture of acute liver cell failure: discuss it from fulminant hepatitis p 38
book 2:

* Progressive jaundice, bleeding, rapidly developing coma

- Clinical picture of chronic liver cell failure: discuss

• Investigations: discuss them from "to prove acute hepatic failure (fulminant hepatitis) p 83 book 2"

• Treatment: liver support: discuss it from cholestasis

Hepatosplenomegaly

1. Causes of hepatosplenomegaly

▪ Answer:

• Causes:

- Neonatal period & early infancy: enumerate causes of cholestasis
- Late infancy & early childhood: comment on each cause
- Late infancy: comment each cause

• Investigations: discuss investigation of liver disease or hepatosplenomegaly in general

2. Investigation of liver disease or hepatosplenomegaly in general

▪ Required in questions:

- Chronic hepatitis
- Causes of hepatomegaly
- Causes of hepatosplenomegaly

NEUROLOGY

Hydrocephalus

Cerebral Palsy

1. Clinical types of cerebral palsy

▪ Answer:

1. Spastic cerebral palsy: brief comment
2. Dyskinetic (dystonic or athetoid) cerebral palsy: brief comment
3. Ataxic cerebral palsy: brief comment
4. Cerebral infantile hypotonia: brief comment

2. Investigations & treatment of cerebral palsy

▪ Answer: discuss them from investigations & treatment of mental retardation.

Mental Retardation

1. Clinical grading & prognosis of mental retardation

▪ Answer: discuss grading of mental retardation

2. Causes of mental retardation

▪ Answer:

Causes of mental retardation = Causes of cerebral palsy, epilepsy, Microcephaly

- Etiology of mental retardation: discuss
- N.B: congenital hypothyroidism & phenylketonuria should NOT be causes as they should be diagnosed by routine screening tests & treated before causing mental retardation

3. Acquired causes of mental retardation

- Answer: discuss acquired causes of mental retardation

4. "Clinical diagnosis of mental retardation" LONG

- Answer:
 - It is static or progressive mental retardation: discuss
 - What is the cause of mental retardation: e.g.
 - Down syndrome (give brief comment)
 - Hypothyroidism (give brief comment)

5. "Clinical diagnosis of mental retardation" SHORT

- Answer
 - Is it static or progressive mental retardation: discuss
 - What is the cause of mental retardation: e.g. Down syndrome & hypothyroidism (DO NOT COMMENT, just examples)

6. Investigations of mental retardation

- Answer: discuss investigations of mental retardation

N.B.: investigations of mental retardation= investigations of cerebral palsy, epilepsy, microcephaly

7. Management of mental retardation

- Answer: discuss the management of mental retardation

8. Treatment of Down syndrome

- Answer: discuss it from management of mental retardation as follows
 - General measures: discuss
 - Specific measures:
 - Speech therapy: discuss
 - Ophthalmoscopic assessment: discuss(No dietary or orthopedic or drug measures)

9. "Mental retardation" LONG

- Answer: discuss mental retardation

Seizures

1. Etiology of seizures

- Answer:
 - Neonatal convulsions: discuss their causes from "neonatal seizures p62A book 1"

- Febrile convulsions
- Non recurrent (occasional) symptomatic convulsions: discuss
- Recurrent convulsions (epilepsy): discuss etiology of epilepsy from p106 book 2
 - Idiopathic: discuss
 - Genetic.
 - Symptomatic: enumerate

Epilepsy

1. Etiology of epilepsy

- Answer: discuss the etiology of epilepsy (similar to etiology of mental retardation)

2. "Clinical types of epilepsy" "international classifications of epilepsy"

- Answer: enumerate the clinical types & give short account on each

A. Partial seizures:

1. Simple partial: give brief comment
2. Complex partial: give brief comment

B. Generalized seizures:

1. Absence: give brief comment
2. Generalized tonic clonic: give brief comment
3. Myoclonic: give brief comment
4. Infantile: give brief comment
5. Atonic: give brief comment

3. Partial seizures

- Answer:
 - Etiology: discuss the causes of epilepsy (similar to etiology of mental retardation)
 - Partial seizures: discuss
 - Investigations: discuss investigations of epilepsy (similar to investigations of mental retardation)
 - Treatment: discuss treatment of epilepsy

4. Clinical types & investigations of epilepsy.

5. Treatment of ongoing seizures (treatment of status epilepticus)

- Answer: discuss treatment of ongoing seizures (similar to treatment of neonatal seizures except for diazepam)

6. Antiepileptic drugs

- Answer:
 - Rules important during long term drug therapy: discuss
 - Drugs:
 - Broad spectrum antiepileptic drugs:
 1. Sodium valproate: discuss
 2. Carbamazepine: discuss
 3. Phenobarbitone: discuss

- 4. Phenytoine: discuss
- Others:
 - 5. Clonazepam: discuss
 - 6. Ethosuximide: discuss
- Recent drugs: 7, 8, 9, And 10: discuss. Doses not required in these 4 drugs

Febrile Convulsions

1. Clinical criteria of typical febrile convulsions

- Answer: discuss criteria of TYPICAL febrile convulsions (no atypical)

Meningitis

1. Clinical picture of acute bacterial meningitis

- Answer: discuss clinical picture of acute bacterial meningitis

2. Investigations of acute bacterial meningitis

- Answer: discuss investigations of acute bacterial meningitis

3. Complications of acute bacterial meningitis

- Answer: discuss complications of acute bacterial meningitis

4. Treatment of acute bacterial meningitis

- Answer:

1. Prevention

- Vaccinations
 - In infants in 1st year of life: .discuss Hib vaccine p 132 book 1
 - In children: discuss meningococcal polysaccharide vaccine p132 book 1
- Chemoprophylaxis: .discuss

2. Supportive treatment: discuss

3. Specific treatment (antibiotics): discuss (very important)

- Doses required - IV - 10 to 14 days (3 weeks in neonates)

4. Treatment of complications & follow up after treatment: discuss

5. TB meningitis

- Answer:

- Etiology: discuss

- Clinical picture:

- Clinical picture of T.B meningitis: discuss
- T.B toxemia: night fever, night sweating, weight loss, anorexia

- Investigations:

- Investigations of T.B meningitis: discuss CSF examination (ALL table p.116 book 2: discuss the whole table or at least tuberculous meningitis)
- Tuberculin test.
- Recent methods:

- * ELISA
- * PCR
- * BACTIC

- Treatment:

- Should be started when diagnosis is suspected
- Anti-tuberculous drugs: discuss them from treatment of T.B P17 book 2

Encephalitis

1. Etiology of encephalitis

- Answer: discuss etiology of encephalitis

2. Clinical picture of encephalitis

- Answer: discuss clinical picture of encephalitis (similar to clinical picture of meningitis)

3. Investigations of encephalitis

- Answer

- Laboratory :

- CSF: discuss it from " investigations of acute bacterial meningitis (table page 116 book 2 " the whole table or at least viral meningitis)
- Serological tests: discuss
- Brain biopsy: discuss

- Imaging: discuss

4. Treatment of encephalitis

- Answer: discuss treatment of encephalitis

Brain Abscess

1. Clinical picture, investigations & treatment of brain abscess

- Answer: discuss (clinical picture, treatment, similar to meningitis)

Neuromuscular Disorders

1. Floppy infant LONG

- Answer:

- Definition: discuss

- Etiology:

- I. Central (cerebral disorders):

- Atonic cerebral palsy due to perinatal asphyxia, trauma or CNS infections
 - Chromosomal defect:

- E.g. Down syndrome: write a paragraph on Down syndrome

- II. Peripheral (neuromuscular disorders): discuss

- Clinical manifestations: discuss
- Werding Hoffmann disease: discuss
- Down syndrome: write a paragraph

2. Causes of floppy infant

■ Answer:

- I. Central (cerebral disorders): discuss
 - Atonic cerebral palsy due to perinatal asphyxia, trauma or CNS infections
 - Chromosomal defect:
 - E.g. Down syndrome: write a paragraph on Down syndrome
- II. Peripheral (neuromuscular disorders):
 - Anterior horn cells
 - Werding Hoffman disease:
 - Clinical picture:
 - Neonatal period: hypotonia
 - Later on:
 - * Muscle wasting, fasciculation & severe weakness
 - NORMAL mentality
 - Muscle diseases:
 - Congenital myopathy.
 - Congenital muscular dystrophy.

3. Causes of acute paralysis

■ Answer:

- Brain:
 - Intracranial hemorrhage (vascular strokes)
 - CNS infections
- Spinal cord
 - Transverse myelitis
 - Spinal cord trauma
- Anterior horn cells
 - Poliomyelitis: asymmetric ascending paralysis
- Peripheral nerves:
 - Guillian Barre syndrome:
 - The commonest cause
 - Etiology: postinfection demyelination
 - Clinical picture:
 - acute paralysis:
 - * Ascending: begins in the lower limb & progressively ascends
 - * Respiratory muscle affection
 - * Symmetrical
 - Sensation: paraesthesia
 - Cranial nerves: bulbar paralysis
 - Post diphtheritic paralysis, symmetric. Descending paralysis
- Neuromuscular:
 - Botulism: symmetric descending paralysis

4. Guillain Barre Syndrome
 - Answer: discuss Gillian Barre syndrome
5. Poliomyelitis
6. Etiology of progressive motor weakness
7. Duchenne muscular dystrophy

Nephrology

Nephrosis

1. Causes of proteinuria
 - Answer: discuss etiology of nephrotic syndrome
2. Clinical picture of nephrotic syndrome:
 - Answer: discuss clinical picture of nephrotic syndrome
3. Differential diagnosis generalized edema
 - Answer
 - Enumerate causes of generalized edema
 - Comment on each:
 1. Site of onset
 2. March
 3. Character
 4. Association
4. Treatment of nephrotic syndrome
 - Answer: discuss treatment of nephrotic syndrome

Nephritis

1. Management of nephritis
 - Answer:
 - Treatment: discuss
 - Clinical picture: comment briefly (titles)
 - History:
 - * General symptoms: low grade fever, headache
 - * Urinary symptoms: oliguria, hematuria
 - * History of streptococcal infection
 - Examination
 - * Hypertension
 - * Edema

Chronic Renal Failure

1. 1. Diagnosis of chronic renal failure
 - Answer
 - Diagnosis: discuss
 - Clinical picture: discuss
2. Management of chronic renal failure
 - Answer
 - Management: discuss
 - Diagnosis: is optional

Urinary Tract Infection

1. Etiology of urinary tract infection
 - Answer: Discuss etiology of urinary tract infection
2. Clinical picture urinary tract infection
 - Answer: discuss clinical picture urinary tract infection
3. Investigations of urinary tract infection
 - Answer: discuss investigations of urinary tract infection
4. Diagnosis of urinary tract infection
 - Answer: discuss diagnosis of urinary tract infection
5. Treatment of urinary tract infection
 - Answer: discuss treatment of urinary tract infection
6. Management of urinary tract infections
 - Answer:
 - Treatment: discuss
 - Diagnosis: comment briefly (titles)

Enuresis

1. Enuresis
 - Answer: discuss enuresis

Clinical presentation of Renal Diseases

1. Hematuria

■ Answer:

- Definition, classification: discuss
- Etiology:
 - Kidney:
 - Glomerulonephritis:
 - Acute post streptococcal glomerulonephritis: comment
 - Urinary symptoms: Oliguria – hematuria
 - Hypertension, edema
 - Other types of nephritis e.g. systemic lupus ,
Henoch Schonlein purpura: comment
 - * Rash on buttocks, abdominal pain, arthritis
 - Hemolytic uremic syndrome: comment
 - Hematuria, purpura, renal failure, acute hemolysis
 - Renal vein thrombosis
 - Urological:
 - Urinary tract infection: comment
 - * Dysuria, frequency, hematuria, urgency, loin pain
 - * Urine analysis: pyuria
 - * Urine culture: colony count
 - Urinary stones
 - Hematological:
 - Coagulopathies
 - Thrombocytopenic purpura: comment
 - Bleeding from other sites, purpuric rash, hemoarthrosis
- Investigations: discuss briefly from nephritis & UTI
 - Urine culture: colony count
 - Imaging: ultrasonography, intravenous pyelography, x-ray for stones, urinary tract infection
 - Kidney function tests

2. Hypertension

■ Answer:

- Causes & Clinical differentiation:
 - Acute (transient) hypertension
 - Renal:
 - * Nephritis: comment
 - Oliguria, hematuria, hypertension, edema
 - * Acute renal failure
 - Increased intracranial tension

- Drugs: corticosteroids
- Chronic (persistent) hypertension
 - Renal:
 - * Chronic nephritis
 - * Chronic renal failure: comment from "clinical picture of chronic renal failure, P.133, book 2
 - * Renal artery stenosis
 - Increased intracranial tension
 - Cardiac:
 - * Coarctation of aorta: comment
 - Disparity of blood pressure
 - Murmur: describe, ejection systolic murmur on the left side of the chest
 - * Essential hypertension
 - Endocrinal: Cushing disease
- Investigations:
 - Echocardiography
 - Doppler
 - Renal function tests
 - Urine analysis
 - Ultrasonography on kidney
- Treatment: treatment of the cause

3. Polyuria

- Answer:
 - * Chronic renal failure
 - * Diabetes mellitus, diabetes insipidus
 - * Hypercalcemia (hypervitaminosis D): comment from "p 103 book 1"

Endocrinology

Hypothyroidism

1. Etiology of hypothyroidism

- Answer: discuss answer of hypothyroidism

2. Clinical picture of hypothyroidism

- Answer:
 - Clinical picture of congenital hypothyroidism: discuss
 - Clinical picture of acquired hypothyroidism: discuss

3. Early manifestation of congenital hypothyroidism

- Answer: discuss clinical picture of hypothyroidism in neonatal period

4. Late manifestation of congenital hypothyroidism

- Answer: discuss clinical picture of congenital hypothyroidism in older infants & children

5. Investigations of hypothyroidism

- Answer: discuss investigations of hypothyroidism

6. Diagnosis of acquired hypothyroidism

- Answer:
 - Clinical picture of acquired hypothyroidism: discuss
 - Investigations: discuss
 - Do NOT write thyroid screening program

7. Diagnosis of neonatal hypothyroidism

- Answer:
 - Clinical picture of congenital hypothyroidism in neonatal period: discuss
 - Investigations: discuss
 - Neonatal thyroid screening program: discuss

8. Acquired hypothyroidism

- Answer: discuss all items, excluding congenital:
 - Etiology of acquired hypothyroidism: discuss
 - Clinical picture of acquired hypothyroidism: discuss
 - Investigations: discuss (not neonatal thyroid screening program)
 - Treatment: discuss

Diabetes

1. Etiology & pathogenesis of diabetes mellitus

- Answer: discuss etiology & pathogenesis of diabetes mellitus

2. Clinical presentation of diabetes mellitus

- Answer: discuss clinical picture of diabetes mellitus

3. Diagnosis of diabetes mellitus

- Answer:
 - Clinical picture: discuss
 - Investigations: discuss
 - Differential diagnosis: discuss

4. Complications of diabetes mellitus

- Answer:
 - Acute complications:
 - Ketosis: discuss diabetic ketoacidosis
 - Clinical picture of ketoacidosis
 - * Early manifestations: discuss
 - * Late manifestations: discuss
 - Investigations of diabetic ketoacidosis : discuss
 - Infections

- Hypoglycemia (with hyper dose of insulin or improper diet)
- Chronic complications: enumerate

5. Management of diabetic ketoacidosis

▪ **Answer:**

- Clinical picture of diabetic ketoacidosis: discuss
- Investigations of diabetic ketoacidosis: discuss
- Differential diagnosis of diabetic ketoacidosis :
 - Coma - abdominal pain - dehydration - respiratory distress
- Treatment of diabetic ketoacidosis : discuss

6. Long term treatment of insulin dependant diabetes mellitus

- **Answer:** discuss Long term treatment of insulin dependant diabetes mellitus

RHEUMATOLOGY

1. Causes of arthritis

■ Answer:

- Infections: bacteria (pyogenic or TB) viral (mumps (comment) - rubella)
- Post infection:
 - Rheumatic fever: comment on rheumatic arthritis
 - * Polyarticular
 - * Affecting large joints e.g. Knee
 - * Affected joints are inflamed
 - * Migratory
 - * Dramatic response to salicylates
 - * It leaves the joint completely free
- Collagen vascular diseases:
 - Juvenile rheumatoid arthritis: comment
 - Types:
 - A- polyarticular:
 - Symmetric affection of 5 joints or more
 - Cervical spine & temporomandibular joints
 - (SMALL & large joints) are affected
 - B- Pauciarticular:
 - Asymmetrical arthritis usually knees & ankles
 - Iridocyclitis
 - C- Type 2:
 - Juvenile ankylosing spondylitis
 - D- Systemic onset:
 - Fever: spiky
 - Rash: variable
 - Hepatosplenomegally
 - Systemic lupus erythematosus: comment
 - * Malar rash
 - * Discoid lupus rash
 - * Arthritis
 - * Nephritis
 - Henoch Schonlein purpura: comment
 - * Rash on buttocks
 - * Purpura
 - * Abdominal pain
 - * Arthritis
 - Kawasaki disease
- Hematological:
 - Sickle cell anemia: comment
 - Hemophilia: comment * hemoarthritis * bleeding

- Leukemia:

* Manifestations due to bone marrow infiltration:

. Anemia, purpura prolonged fever, arthralgia

* Manifestations due to organ infiltration:

. Splenomegally. Hepatomegally, lymphadenopathy

• GIT: inflammatory bowel disease

• Traumatic

2. Criteria of diagnosis of systemic lupus erythematosus

▪ Answer: discuss diagnosis of systemic lupus erythematosus

PUBERTY

1. Puberty

▪ Answer: discuss Puberty

Comments

Comment on measles

- Koplik's spot is pathognomic
- Rash:
 - * Rash appears on 4th day, fever rises sharply with rash appearance.
 - * distribution : rash spreads in 3 days , starting in face then spreading all over the body , fades in 3 days in the same way of distribution .

Comment on Rubella

- Cervical lymphadenitis.
- Rash:
 - * Rash appears on the 2nd day of fever, fever drop with rash appearance.
 - * All rash duration is 3 days.

Comment on Scarlet Fever

- Sore throat.
- Rash:
 - * Rash appears on 2nd day, fever rises with rash appearance
 - * Sand –paper like papules.
 - * Tongue: white then red strawberry tongue.

Comment on Infectious Mononucleosis

- Lymphadenitis, splenomegaly, sore throat.

Comment on Typhoid Fever

- Splenomegaly, abdominal symptoms (commonest).
- toxic facies

Comment on Pertussis

Severe sporadic successive croups, ending in inspiratory whooping or vomiting.

Comment on Pertussis like Illness

By adenovirus infection

Comment on Respiratory Distress Syndrome

- Mainly in premature infants
- 1- SEVERE progressive respiratory distress SHORTLY after birth
 - 2- Auscultation: diminished air entry
 - 3- X ray: discuss reticulogranular pattern with air bronchogram

Comment on Transient Tachypnea of Newborn

- Mild self limited transient respiratory distress (tachypnea)
- Regressive course (improvement) within 2 days

- X ray: increased pulmonary vascular marking

Comment on Meconium Aspiration Syndrome

- History of fetal distress
- Clinical picture: progressive distress, skin may be meconium stained
- X ray: patchy opacities of lung collapse

Comment on Congenital Pneumonia

- Etiology: history of premature rupture of membranes
- Respiratory distress in 1st few hours after birth
- X ray: patchy opacities

Comment on Hypoglycemia

Blood gases less than 40 mg% in the first 72 % hours of life

Comment on Hypocalcemia

Serum Ca less than 7 mg %

Comment on hypervitaminosis D

polyuria , constipation, calcification , renal stones

Comment on Rheumatic arthritis

- Polyarticular
- Affecting large joints e.g. knee
- Affecting joints are inflamed
- Migratory
- Dramatic response to salicylates
- It leaves the joints completely free

Comment on Coarctation of Aorta

- Disparity of blood pressure
- Murmur: describe, ejection systolic murmur on the left side of the chest

Comment on Bronchial Asthma

- * The most common cause of recurrent wheezing
- * diagnosis of bronchial asthma is clinical & depends on reliable history of repeated attacks of wheezes & cough after exclusion of other less common causes of wheezes .
- * Examination:
 - During attack:
 - Auscultation:
 - * Harsh vesicular breathing with prolonged expiration.
 - * Expiratory wheezes
 - In between the attacks: the patient is free

Comment on Acute Bronchiolitis

- * The commonest cause in infancy
- * During infancy, viral infection preceded by upper respiratory tract infection
- * sneezing, nasal discharge, wheezing, respiratory distress
- * Not recurrent wheezing

Comment on Tuberculosis

TB toxemia: night sweating, anorexia, loss of weight. &
May be other symptoms as hemoptysis and wheezes

Comment on Acute Bronchitis

- * Initial stage of nasopharyngitis
- * Followed by dry cough & chest discomfort (for few days)
- * Later on, cough becomes productive cough, by auscultation harsh vesicular breathing.
- * In convalescent stage, cough decline in frequency & severity

Comment on Acute Laryngitis

Croupy cough & may be stridor

Comment on Pneumonia

Fever, bronchial breathing, creptations

Comment on Immune Thrombocytopenic Purpura

- * Onset is acute, 1-2 weeks after a viral infection in 60-80 % of cases
- * Anemia due to blood loss
- * The liver and the spleen are usually NOT enlarged
- * Investigations:
 1. Blood picture:
 - Thrombocytopenia
 - Anemia if there is significant blood loss
 - Antiplatelet antibodies
 2. Bone marrow examination:
 - Normal or increased megakaryocyte: with defective bleeding

Comment on Aplastic Anemia

- * Def: aplasia of the precursors of the 3 blood elements in the bone marrow leading to pancytopenia in the peripheral blood (anemia, purpura & infections).
Splenomegaly & lymphadenopathy are ABSENT
- * Congenital: (Fanconi's anemia)
 1. General manifestations:
 - Skeletal anomalies: microcephaly
 - microphthalmia and generalized hyperpigmentation
 2. Hematological manifestations:
 - Present usually above the age of years

* Acquired aplastic pancytopenia :

• Etiology:

- Idiopathic
- Infections: e.g. hepatitis
- Drugs: chloramphenicol

Comment on Leukemia

* Manifestations due to bone marrow infiltration:

- Anemia, purpura, prolonged fever, arthralgia, weight loss

* Manifestations due to organs infiltrations:

- Splenomegaly, hepatomegaly & lymphadenopathy

Comment on Henoch Schonlein Purpura

Rash on buttocks, purpura, abdominal pain, arthritis

Comment on Von Willebrand Disease

Autosomal dominant, prolonged bleeding time & clotting time.

Comment on Werding Hoffman Disease

- Clinical picture:

- Neonatal period: hypotonia

- Later on:

- * Muscle wasting, fasciculation & severe weakness

- NORMAL mentality

Comment on Guillian Barre Syndrome

• The commonest cause

• Etiology: postinfection demyelination

• Clinical picture:

- acute paralysis:

- * Ascending in the lower limb & progressively ascends
- * Respiratory muscle affection
- * Symmetrical

- Sensation: paraesthesia

- Cranial nerves: bulbar paralysis

Comment on Acute post streptococcal glomerulonephritis

- Urinary symptoms: Oliguria – hematuria

- Hypertension, edema

Comment on Chronic Renal Failure

Hypertension, anuria, growth failure

Comment on Urinary Tract Infection

- * Dysuria, frequency, hematuria, urgency, loin pain

- * Urine analysis: pyuria
- * Urine culture: colony count

Comment on Hemolytic Uremic Syndrome

- Hematuria, purpura, renal failure, acute hemolysis

Comment on Juvenile Rheumatoid Arthritis

- Types:
 - A- polyarticular:
 - Symmetric affection of 5 joints or more
 - Cervical spine & temporomandibular joints
 - (Small & large joints) are affected
 - B- Pauciarticular:
 - Asymmetrical arthritis usually knees & ankles
 - Iridocyclitis
 - C- Type 2:
 - Juvenile ankylosing spondylitis
 - D- Systemic onset:
 - Fever: spiky
 - Rash: variable
 - Hepatosplenomegally

Comment on Systemic lupus Erythematosus

- * Malar rash
- * Discoid lupus rash
- * Arthritis
- * Nephritis

Comment on Diabetic Ketosis

Dehydration, acidosis, abdominal pain, polyuria

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